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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,246	07/31/2000	OSAMU WADA	106389	9837
25944	7590	01/15/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			OSORIO, RICARDO	
			ART UNIT	PAPER NUMBER
			2673	22

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/601,246

Applicant(s)

WADA ET AL.

Examiner

RICARDO L OSORIO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-11, and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11, and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 21.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-11 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by McKnight (5,959,598).

Under claims 1, 3, 11, and 13-18, McKnight teaches of a color display device, or projector (col. 1, lines 27-43, it is inherent that a projection device needs a lens to project the image) comprising a color light generation unit that repetitively generates a plurality of colored lights in a time sequence with a predetermined frequency controlled by the number of the color filter rotations (col. 12, lines 22-30 and col. 18, lines 12-22); said frequency being equal to or greater than 250 Hz (col. 18, lines 12-65), said colored light generation unit comprising a light source (col. 12, lines 21-24), and a color filter that generates said plurality of colored lights from light coming from said light source (col. 18, lines 19-20); and an image generation unit that processes said plurality of colored lights so as to generate an image corresponding to each of said plurality of colored lights generated in a time sequence (Fig. 6A and col. 18, lines 22-30), said predetermined frequency being at least 180 HZ and reaching 300 HZ or higher display rates so as to reduce or eliminate color breakup caused by high speed eye movement (col. 18, lines 12-65. Note that the term high speed eye movement is overly broad).

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Under claim 5, McKnight teaches of said color light generation unit comprising of light sources that emit colored lights different from each other and that turn on in a time sequence (col. 12, lines 22-51).

Under claim 6, McKnight teaches of said image generation unit being a reflection type spatial light modulator (col. 14, line 64-col. 15, line 6).

Under claim 7, McKnight teaches of said spatial light modulator being a liquid crystal device (col. 1, line 40).

Under claim 8, McKnight teaches of said image generation unit being a digital micro-mirror device (col. 1, line 37).

Under claim 9, McKnight teaches of said image generation unit being a transmission type spatial light modulator (col. 14, line 64-col. 15, line 6).

Under claim 10, McKnight teaches of a projection display system (col. 1, line 34). Although, McKnight does not precisely mention of a lens for projecting the image, it is inherent for a projection display to have a lens that is necessary to project the image into the image projection panel.

Response to Arguments

1. Applicant's arguments filed 7/7/2003 have been fully considered but they are not persuasive. Applicant argues that McKnight does not disclose that the color repetition frequency is 250 HZ or more for the color light generation unit and image generation unit.

Examiner disagrees because McKnight teaches of displaying three subframes R, G and B within the duration of a single image which occurs at a rate of 180 HZ (3 times 60 HZ). When interspersing more subframes into the time allotted for the single color image, for example, six,

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nine or even twelve subframes, the rate increases to a much higher rate (above ordinary display rates), which is clearly higher than 300 HZ, for example, six times, nine times, or twelve times 60 HZ). The criticality of increasing the rate is that of reduction of color breakup effects (see col. 18, lines 12-65).

Also, McKnight teaches that said predetermined frequency being at least 180 HZ and reaching 300 HZ or higher display rates so as to reduce or eliminate color breakup caused by high speed eye movement (col. 18, lines 12-65. Note that the term high speed eye movement is overly broad).

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo L. Osorio whose telephone number is (703) 305-2248. The examiner can normally be reached on Mon-Thu from 7:00 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at 305-4938.

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Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Technology Center 2600 Customer Service
Office whose telephone number is (703) 306-0377.

Ricardo L. Osorio
Examiner
Art Unit: 2673

RLO
January 12, 2004



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600